

Model 1604DD, dual drainable blade type louver, provides maximum weather protection in a 4" (102) deep frame, with good air performance and pleasing aesthetics that compliment any structure's exterior styling. Standard construction features a drainable head that collects the water running down the building face and channels it out the concealed downspouts in the side frame, preventing it from flowing down into the airstream. Suitable for use in exhaust and low to medium velocity intake applications, the dual drainable blade design utilizes double rain gutters that divert collected water down concealed side downspouts and out the sill. Blades are reinforced with full length integral bosses for superior strength and the design provides good air performance through it's 51% free area as well as maximum protection against the elements. Model 1604DD is available with channel or flanged type frame to suit most architectural and mechanical installation requirements and is AMCA Licensed.

**STANDARD CONSTRUCTION:**

- FRAME:** 4" (102) deep, Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Integral downspouts and caulking slot provided.
- BLADES:** Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness, with reinforcing bosses.
- BLADE ANGLE:** Fixed at 37 degrees.
- BLADE SPACING:** Approx. 4" (102) on centers.
- BLADE SUPPORT BRACKETS:** Concealed type, factory installed on rear of louver on maximum 60" (1524) centers. Reinforced with 1 1/2" x 2" (38 x 51) angle (adds approx. 2" [51] to overall louver depth).
- MULLIONS:** Concealed type allowing continuous line appearance up to 120" (3048) wide. Larger assemblies require separate visible frames with downspouts.
- SCREEN:** 3/4" x .051 (19 x 1.3) expanded, flattened aluminum bird screen in removable frame, inside (rear) mount (adds approximately 3/8" [10] to louver depth).
- FINISH:** Mill.
- MINIMUM SIZE:** 12" W x 12" H (305 x 305).
- MAX. SINGLE SECTION SIZE:** 120" W x 84" H (3048 x 2134) or 84" W x 120" H (2134 x 3048). 70 sq. ft. (6.5m<sup>2</sup>). Larger louvers will require field assembly of smaller sections.

**OPTIONS:**

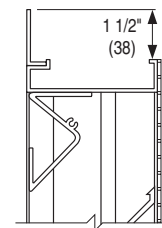
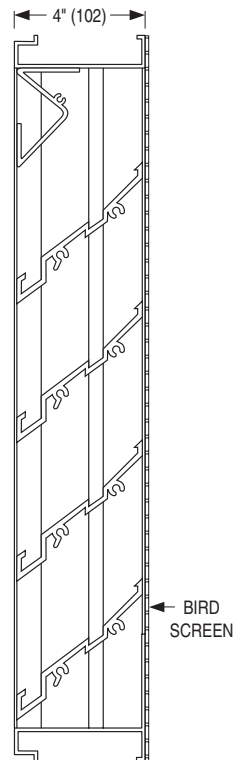
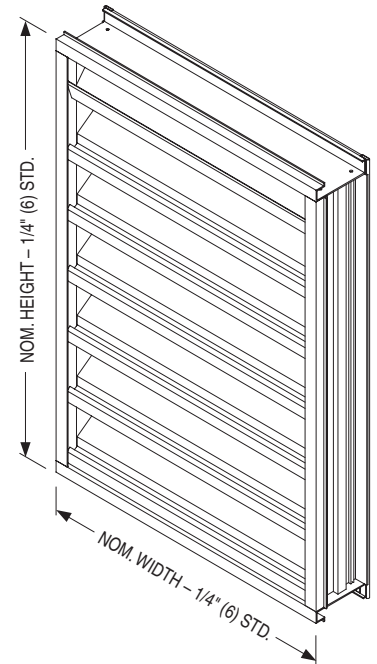
- |   |  |
|---|--|
| <input type="checkbox"/> <b>FL15</b> Flanged Frame, 1 1/2" (38).  | <input type="checkbox"/> <b>WE</b> Welded Construction.      |
| <input type="checkbox"/> <b>FL20</b> Flanged Frame, 2" (51).      | <input type="checkbox"/> <b>ESI</b> Extended Sill.           |
| <input type="checkbox"/> <b>BSSS</b> Type 304 S.S. Bird Screen.   | <input type="checkbox"/> <b>FR1</b> 1" (25) Filter Rack.     |
| <input type="checkbox"/> <b>BSN</b> No Bird Screen.               | <input type="checkbox"/> <b>FR2</b> 2" (51) Filter Rack.     |
| <input type="checkbox"/> <b>ISA</b> Aluminum Insect Screen.       | <input type="checkbox"/> <b>PACA</b> Perimeter Anchor Clips. |
| <input type="checkbox"/> <b>ISSS</b> Type 304 S.S. Insect Screen. | <input type="checkbox"/> <b>Other:</b> _____ .               |

**OPTIONAL FINISHES:**

- PC3** Powder Coat AAMA 2603. Color: \_\_\_\_\_ .
- PC4** High Performance Powder Coat AAMA 2604 (Equiv. to 50% Kynar<sup>®</sup>). Color: \_\_\_\_\_ .
- PC5** Fluoropolymer Powder Coat AAMA 2605 (Equiv. to 70% Kynar<sup>®</sup>). Color: \_\_\_\_\_ .
- PCC** Prime Coat.
- AN04** Clear Anodized 204-R1.
- AN15** Clear Anodized 215-R1.
- Color Anodized:
- |  |   |
|--|---|
| <input type="checkbox"/> <b>ANLB</b> Light Bronze. | <input type="checkbox"/> <b>ANMB</b> Medium Bronze. |
| <input type="checkbox"/> <b>ANDB</b> Dark Bronze.  | <input type="checkbox"/> <b>ANBK</b> Black.         |

**OPTIONAL W x H SIZING** (1/4" [6.5] Undersize standard):

- U00** Exact Size.
- U38** Undersize 3/8" (9.5).
- U50** Undersize 1/2" (12.7).


 OPT. FLANGED FRAME  
 (FL15 STD.)

← BIRD SCREEN

**SCHEDULE TYPE:**
**PROJECT:**
**ENGINEER:**
**CONTRACTOR:**

DATE	B SERIES	SUPERSEDES	DRAWING NO.
3 - 12 - 24	1600	2 - 17 - 22	1604DD



**EXTRUDED ALUMINUM STATIONARY LOUVER  
4" (102) DEEP • DUAL DRAINABLE BLADE  
PERFORMANCE DATA  
MODEL: 1604DD**

**FREE AREA in Square Feet and Square Meters**

		Width in Inches and Meters																		
		12 0.30	18 0.46	24 0.61	30 0.76	36 0.91	42 1.07	48 1.22	54 1.37	60 1.52	66 1.68	72 1.83	78 1.98	84 2.13	90 2.29	96 2.44	102 2.59	108 2.74	114 2.90	120 3.05
Height in Inches and Meters	12 0.30	0.23 0.02	0.37 0.03	0.51 0.05	0.65 0.06	0.79 0.07	0.93 0.09	1.07 0.10	1.21 0.11	1.35 0.13	1.49 0.14	1.63 0.15	1.77 0.16	1.91 0.18	2.05 0.19	2.19 0.20	2.33 0.22	2.47 0.23	2.61 0.24	2.75 0.26
	18 0.46	0.54 0.05	0.86 0.08	1.18 0.11	1.51 0.14	1.83 0.17	2.15 0.20	2.47 0.23	2.80 0.26	3.12 0.29	3.44 0.32	3.77 0.35	4.09 0.38	4.41 0.41	4.73 0.44	5.06 0.47	5.38 0.50	5.70 0.53	6.02 0.56	6.35 0.59
	24 0.61	0.73 0.07	1.17 0.11	1.61 0.15	2.05 0.19	2.49 0.23	2.93 0.27	3.37 0.31	3.81 0.35	4.25 0.40	4.69 0.44	5.13 0.48	5.57 0.52	6.01 0.56	6.45 0.60	6.89 0.64	7.33 0.68	7.77 0.72	8.21 0.76	8.65 0.80
	30 0.76	1.01 0.09	1.62 0.15	2.23 0.21	2.83 0.26	3.44 0.32	4.05 0.38	4.65 0.43	5.26 0.49	5.87 0.55	6.47 0.60	7.08 0.66	7.69 0.71	8.30 0.77	8.90 0.83	9.51 0.88	10.12 0.94	10.72 1.00	11.33 1.05	11.94 1.11
	36 0.91	1.29 0.12	2.06 0.19	2.84 0.26	3.61 0.34	4.39 0.41	5.16 0.48	5.93 0.55	6.71 0.62	7.48 0.70	8.26 0.77	9.03 0.84	9.80 0.91	10.58 0.98	11.35 1.05	12.13 1.13	12.90 1.20	13.67 1.27	14.45 1.34	15.22 1.41
	42 1.07	1.51 0.14	2.42 0.23	3.33 0.31	4.24 0.39	5.15 0.48	6.06 0.56	6.96 0.65	7.87 0.73	8.78 0.82	9.69 0.90	10.60 0.98	11.51 1.07	12.41 1.15	13.32 1.24	14.23 1.32	15.14 1.41	16.05 1.49	16.95 1.58	17.86 1.66
	48 1.22	1.79 0.17	2.87 0.27	3.94 0.37	5.02 0.47	6.09 0.57	7.17 0.67	8.14 0.76	9.32 0.87	10.39 0.97	11.47 1.07	12.54 1.17	13.62 1.27	14.69 1.37	15.77 1.46	16.84 1.56	17.92 1.66	18.99 1.76	20.07 1.86	21.14 1.96
	54 1.37	2.07 0.19	3.31 0.31	4.55 0.42	5.80 0.54	7.04 0.65	8.28 0.77	9.52 0.88	10.76 1.00	12.00 1.12	13.25 1.23	14.49 1.35	15.73 1.46	16.97 1.58	18.21 1.69	19.46 1.81	20.70 1.92	21.94 2.04	23.18 2.15	24.42 2.27
	60 1.52	2.29 0.21	3.67 0.34	5.05 0.47	6.42 0.60	7.80 0.72	9.18 0.85	10.55 0.98	11.93 1.11	13.30 1.24	14.68 1.36	16.06 1.49	17.43 1.62	18.81 1.75	20.19 1.88	21.56 2.00	22.94 2.13	24.32 2.26	25.69 2.39	27.07 2.51
	66 1.68	2.58 0.24	4.13 0.38	5.68 0.53	7.23 0.67	8.78 0.82	10.32 0.96	11.87 1.10	13.42 1.25	14.97 1.39	16.52 1.53	18.07 1.68	19.61 1.82	21.16 1.97	22.71 2.11	24.26 2.25	25.81 2.40	27.36 2.54	28.91 2.69	30.45 2.83
	72 1.83	2.80 0.26	4.47 0.42	6.15 0.57	7.83 0.73	9.50 0.88	11.18 1.04	12.86 1.19	14.54 1.35	16.21 1.51	17.89 1.66	19.57 1.82	21.25 1.97	22.92 2.13	24.60 2.29	26.28 2.44	27.96 2.60	29.63 2.75	31.31 2.91	32.99 3.06
	78 1.98	3.07 0.29	4.92 0.46	6.76 0.63	8.61 0.80	10.45 0.97	12.30 1.14	14.14 1.31	15.99 1.49	17.83 1.66	19.67 1.83	21.52 2.00	23.36 2.17	25.21 2.34	27.05 2.51	28.90 2.68	30.74 2.86	32.59 3.03	34.43 3.20	36.28 3.37
84 2.13	3.35 0.31	5.36 0.50	7.38 0.69	9.39 0.87	11.40 1.06	13.41 1.25	15.42 1.43	17.43 1.62	19.44 1.81	21.45 1.99	23.47 2.18	25.48 2.37	27.49 2.55	29.50 2.74	31.51 2.93	33.52 3.11	35.53 3.30	37.55 3.49	39.56 3.67	
90 2.29	3.58 0.33	5.72 0.53	7.87 0.73	10.01 0.93	12.16 1.13	14.30 1.33	16.45 1.53	18.59 1.73	20.74 1.93	22.88 2.13	25.03 2.33	27.17 2.52	29.32 2.72							
96 2.44	3.85 0.36	6.17 0.57	8.48 0.79	10.79 1.00	13.10 1.22	15.42 1.43	17.73 1.65	20.04 1.86	22.35 2.08	24.67 2.29	26.98 2.51	29.29 2.72	31.60 2.94							
102 2.59	4.14 0.38	6.62 0.61	9.10 0.85	11.58 1.08	14.06 1.31	16.55 1.54	19.03 1.77	21.51 2.00	23.99 2.23	26.47 2.46	28.95 2.69	31.44 2.92	33.92 3.15							
108 2.74	4.36 0.40	6.97 0.65	9.58 0.89	12.20 1.13	14.81 1.38	17.42 1.62	20.04 1.86	22.65 2.10	25.27 2.35	27.88 2.59	30.49 2.83	33.11 3.08	35.72 3.32							
114 2.90	4.63 0.43	7.42 0.69	10.20 0.95	12.98 1.21	15.76 1.46	18.54 1.72	21.32 1.98	24.10 2.24	26.88 2.50	29.66 2.76	32.44 3.01	35.22 3.27	38.00 3.53							
120 3.05	4.86 0.45	7.77 0.72	10.69 0.99	13.60 1.26	16.51 1.53	19.43 1.80	22.34 2.08	25.26 2.35	28.17 2.62	31.09 2.89	34.00 3.16	36.91 3.43	39.83 3.70							



<b>SCHEDULE TYPE:</b>	Page 2 of 3			
<b>PROJECT:</b>	Dimensions are in inches (mm).			
<b>ENGINEER:</b>	<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>
<b>CONTRACTOR:</b>	3 - 12 - 24	1600	2 - 17 - 22	1604DD



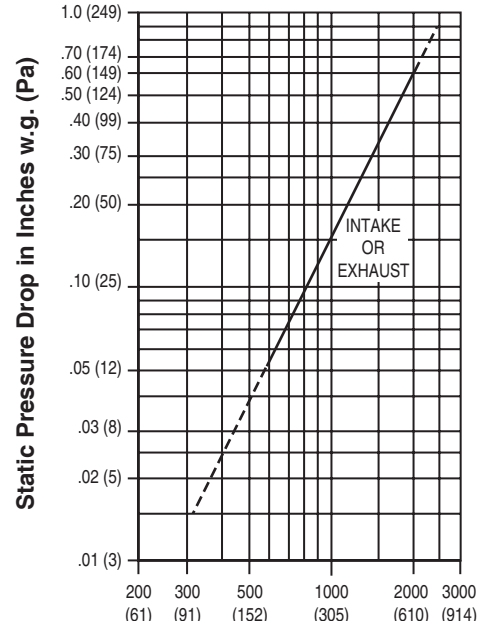
**EXTRUDED ALUMINUM STATIONARY LOUVER  
4" (102) DEEP • DUAL DRAINABLE BLADE  
PERFORMANCE DATA  
MODEL: 1604DD**

**AIRFLOW/WATER PENETRATION DATA  
for 48" x 48" (1219 x 1219) Louver Size**

Free Area %	51%	
Free Area sq. ft. (sq. m.)	8.14 (0.76)	
I N T A K E	Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	1000 fpm (305 m/min.)
	Air Volume at 1000 fpm	8140 cfm (3841 l/s)
	Free Area Velocity	
	Pressure Drop @ 1000 fpm	.16 in. w.g. (40 Pa)

**NOTE:** To minimize water penetration when sizing intake louvers, select a Free Area Velocity that is **below** the point of beginning water penetration.

**PRESSURE DROP**



**Air Velocity in Feet (Meters) Per Minute Through Free Area**  
Louver test size: 48" x 48" (1219 x 1219 mm).  
Standard air density @ 0.075 lbs/ft<sup>3</sup>.  
Tested to AMCA Fig. 5.5 – 6.5.



Nailor Industries Inc. certifies that the Model 1604DD shown herein is licensed to bear the AMCA Certified Ratings Program seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Program seal applies to Water Penetration and Air Performance ratings.

Louvers were tested in accordance with AMCA Standard 500-L.



<b>SCHEDULE TYPE:</b>	Page 3 of 3			
<b>PROJECT:</b>	Dimensions are in inches (mm).			
<b>ENGINEER:</b>	<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>
<b>CONTRACTOR:</b>	3 - 7 - 24	1600	2 - 17 - 22	1604DD